REMARKS

Applicants are in receipt of the detailed Office Action mailed January 2, 2003. Claims 36-66 are currently pending in the application. Applicants request reconsideration of the remaining claims in view of the following remarks.

IN THE SPECIFICATION:

The Examiner has objected to the term "deep pass filter" with respect to items 402 and 403 as not being clear, concise or exact. Applicants have determined that the correct translation of "Teifpassfilter" as recited in the original PCT filing is a "low pass filter". Applicants now respectfully request that the respective paragraphs in the specification be amended to recite that the filters 402 and 403 are low pass filters.

IN THE DRAWINGS:

The Examiner has objected to the drawings and now requires under 37 CFR 1.84(o) that each of the "boxes" in the drawings be filled with nomenclature describing each unidentified box. Applicants have so labeled the boxes in Figures 1-2 and 4-7. Applicants submit that Figures 1-2 and 4-7 are now labeled in accordance with the requirements of 37 CFR 1.84(o) and provide the required clarity for one practiced in the art to understand the drawing. The Applicant has included, concurrently herewith, two copies of redlined drawings including the proposed labeling of boxes for Figures 1-2 and 4-7 for the Examiner's approval. Applicant respectfully requests reconsideration.

35 U.S.C. §112 REJECTION

Claims 36-66 are rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter. Specifically, the Examiner requires that the first and second filters recited in the claims be specified as to type. Applicants respectfully submit that the term "deep pass" as originally recited in the claims and as recited in the specification is more accurately translated as a "low pass" filter from the German recitation of "Teifpassfilter" in the original PCT filing. For clarity, Applicants have

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amended the claims to insert the term "low pass". Applicant respectfully requests reconsideration.

35 U.S.C. §102 REJECTION

Claims 36-66 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,682,333 ("Baumann"). The Examiner reiterates his rejection from his July 2, 2002 office action and states that Baumann, at Column 5, line 24, discloses determining correction values for individual wheels in groups. Applicants again respectfully traverse the rejection.

In support of Applicant's traverse, Applicants adopt their arguments from their Amdendment dated October 2, 2002 and restated herein. Baumann generally discloses a device for balancing wheel speeds with respect to a reference wheel. As disclosed in Column 2, lines 11-16, Baumann discloses providing a fine balancing technique that uses two wheels in pairs to obtain a balancing. The Examiner further points to Column 5, line 24 to support this contention.

The specification at page 2 of the present application discusses Baumann. Here, it is stated that Baumann describes determining rough-stage scaling factors during non-cornering, a predetermined minimum speed and acceleration. Subsequently, a fine-stage scaling factor is determined, wherein the wheels of one side are scaled to each other if a low driving moment exceeding a minimum speed is detected, or wheels of each axle are scaled together if a higher driving moment, moderate cornering, or minimum speed is exceeded. However, Baumann does not disclose generating initial correction values from wheels on both sides of the vehicle as well as across-axle to determine final correction values. Moreover, Baumann does not disclose using initial correction values from each of these groups to arrive at final correction values.

Amended independent Claims 36 and 55 claim respectively a method and device that recite that the speeds of the wheels are evaluated in the groups of one of the axles, the left-hand vehicle side, and the right-hand vehicle side, and further that the final correction values for the individual wheels are determined in accordance with the determined initial correction values of the axle, the left-hand vehicle side, and the right-hand vehicle side. As described in the specification at page 3, line 12, the claimed invention overcomes the shortcomings of

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Baumann by comparing the vehicle wheel speeds in pairs to generate final correction values. Applicant respectfully submits that for the reasons set forth above, Claims 36 and 55 and all claims depending therefrom are in condition for allowance.

CONCLUSION

For at least the above reasons, Applicants respectfully submits that the present invention, as claimed, is patentable over the prior art. If the Examiner has any issues which he believes can be expedited by a telephone conference, he is encouraged to telephone the undersigned Representative.

It is believed that any additional fees due with respect to the filing of this paper should be identified in any accompanying transmittal. However, if any additional fees are required in connection with the filing of this paper that are not identified in any accompanying transmittal, permission is given to charge Deposit Account 18-0013 in the name of Rader, Fishman & Grauer PLLC.
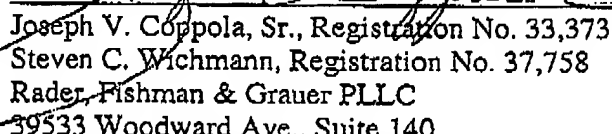
CLAIMS AS PENDING

Attached hereto is a complete set of all claims pending in this application.

Respectfully submitted,

Date: May 2, 2003

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MARKED UP VERSION OF THE SPECIFICATION

Please replace the paragraph beginning at page 11, line 1, with the following:

If the preliminary values of correction are calculated immediately (optionally, with no temporary storage in register 220 in Fig. 2), the variables Kv1 and Kv4 can be filtered with the aid of a [deep] low pass filter (preferably of the first order with limited change speed) to thereby continuously exclude transient detrimental effects.

Please replace the paragraph beginning at page 12, line 1, with the following:

Fig. 4 shows a logical circuit serving for straight travel detection. It can be integrated, for example, in the state detection 210 according to Fig. 2. Unit 401 determines the percentage speed of the wheels of an axle, preferably of the axle non-driven for which purpose the speeds of the wheels of that axle are received, i.e. signals 111a and 112a from the front axle for a vehicle with tail drive. Unit 401 can form and issue the difference, preferably the normalized difference, more preferred normalized to the lower of the two differences. The value can be signed in response to the speed ratios (V4> V3 or V3> V4). Numerals 402 and 403 designate two filters of different time constants. They receive and filter the output signal DVNA of unit 401. They are both [deep] low pass filters. 402 has a higher time constant than filter 402, for example, a time constant higher by at least the factor 5-10. The time constant of the deep pass filter 402 can be in the range of between 10 and 100 ms. FILS (filter slow) and FILF (filter fast) are formed as output signals. These signals are evaluated in block 404. A signal 405 is generated that identifies straight travel and that can be used for generating a signal for actuating the gate circuit 221 according to Fig. 2. The slow-filtered value from filter 403 can be interpreted as "memory" for values going back to the past. If a difference results between the two filtered output values FILF and FILS, this will be indicative of dynamic steering and, hence, a non-straight travel.

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MARKED UP VERSION OF ALL AMENDED CLAIMS

36. (Second Amended) A method for determining correction values for wheel speeds of a vehicle, comprising the step of:

determining the speeds of the vehicle wheels during travel,

evaluating the speeds of the wheels in groups, for the wheels of the non-driven axle, and for the wheels of the left-hand vehicle side and the right-hand vehicle side to obtain initial correction values for the non-driven axle, for the left-hand vehicle side, and for the right-hand vehicle side based on the speeds of the wheels in the groups,

and determining final correction values for the individual wheels of the vehicle in accordance with the initial non-driven axle, left-hand vehicle side, and right-hand vehicle side correction values obtained in the evaluation step.

48. (Second Amended) A method according to claim 47, wherein the difference of the wheel speeds includes using a first low pass filter with a first time constant and, in parallel thereto, and using a second low pass filter with a second time constant exceeding the first time constant, and further including checking whether the amount of difference of the output signals of the two filters is below a threshold value.

54. (Second Amended) A method according to claim 48, wherein the evaluation in groups for the wheels of one axle is continuous in that upon detection of straight driving, the output signal of the second low pass filter is stored as a reference value preliminarily representing the result of the evaluation, the reference value is compared to current output signals of the second low pass filter and, in case of differences, the reference value is tracked with part of the difference to the current signal value, with an acknowledgement signal used to release the stored reference value being additionally generated if the difference within a predetermined period of time was sufficiently small.

55. (Second Amended) A device for determining values of correction for the wheel speeds of a vehicle, comprising:

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wheel sensors for determining the speeds of [the] wheels of the vehicle during travel,

determining means for evaluating the speeds of the vehicle wheels in groups for at least one vehicle axle [and at least one] , for a left-hand vehicle side and for a right-hand vehicle side to obtain initial correction values, and

means for determining the final values of correction for the individual wheels of the vehicle in accordance with the initial vehicle axle, left-hand vehicle side and right-hand vehicle side correction values obtained [during the determining step] by the determining means for evaluating the speeds of the vehicle wheels.

61. (Second Amended) A device according to claim 58, wherein the detecting means for detecting the straight travel of the vehicle further includes at least one low pass filter for evaluating the value of the difference between the wheel speeds of one axle.

62. (Second Amended) A device according to claim 61, wherein the detecting means for detecting the straight travel further includes a first [deep pass] filter having a first time constant, and a second low pass filter having a second time constant exceeding the first time constant, and a check means for checking the difference of the output signals of the two filters.

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